

## SEQUENCE LISTING

<110> Wang, Caili  
Zhong, Pingyu  
Wang, Xinwei

<120> ADAPTER-DIRECTED DISPLAY SYSTEMS

<130> 13403.0005NPUS00

<160> 24

<170> PatentIn version 3.1

<210> 1

<211> 57

<212> DNA

<213> Bacteriophage M13

<400> 1

gtgaaaaaat tattattcgc aattccttta gttgttcctt tctattctca ctccgct  
57

<210> 2

<211> 19

<212> PRT

<213> Bacteriophage M13

<400> 2

Val	Lys	Lys	Leu	Leu	Phe	Ala	Ile	Pro	Leu	Val	Val	Pro	Phe	Tyr	Ser
1				5					10					15	

His Ser Ala

<210> 3

<211> 57

<212> DNA

<213> Bacteriophage M13

<400> 3

gtgaaaaaat tattattcgc aattccttta gtggtacctt tctattctca ctccgct  
57

<210> 4  
 <211> 222  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic, comprising phage gene III leader sequence, GABAB  
 recep  
 tor 2 domain and Myc domain

<400> 4  
 ttagtggtac ctttctattc tcactccgct acatcccgcc tggagggcct acagtcagaa  
 60  
  
 aaccatcgcc tgcgaatgaa gatcacagag ctggataaag acttggaaga ggtcaccatg  
 120  
  
 cagctgcagg acgtcggagg ttgcgcggcc gcagaacaaa aactcatctc agaagaggat  
 180  
  
 ctgagatctg gaggcggtac tgttgaaagt tgtttagcaa aa .  
 222

<210> 5  
 <211> 74  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic, comprising phage gene III leader sequence, GABAB  
 recep  
 tor 2 domain and Myc domain

<400> 5

Leu Val Val Pro Phe Tyr Ser His Ser Ala Thr Ser Arg Leu Glu Gly  
 1 5 10 15

Leu Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp  
 20 25 30

Lys Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys  
 35 40 45

Ala Ala Ala Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Arg Ser Gly  
 50 55 60

Gly Gly Thr Val Glu Ser Cys Leu Ala Lys  
 65 70

<210> 6  
 <211> 56  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Synthetic, comprising phage gene III leader sequence, GABAB  
 recep  
 tor 2 domain and Myc domain

<400> 6

Thr Ser Arg Leu Glu Gly Leu Gln Ser Glu Asn His Arg Leu Arg Met  
 1 5 10 15

Lys Ile Thr Glu Leu Asp Lys Asp Leu Glu Glu Val Thr Met Gln Leu  
 20 25 30

Gln Asp Val Gly Gly Cys Ala Ala Ala Glu Gln Lys Leu Ile Ser Glu  
 35 40 45

Glu Asp Leu Arg Ser Gly Gly Gly  
 50 55

<210> 7  
 <211> 3093  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic, comprising ampicillin gene sequence, ColE1 repli  
 cation  
 origin, f1 replication origin, Plac promoter, GABAB recept  
 or 1 d  
 omain, histidine tag

tctttaatag tggactcttg ttccaaactg gaacaacact caaccctatc tcggtctatt

Page 4

960

cttttgattt ataagggatt ttgccgattt cggcctattg gttaaaaaat gagctgattt  
1020

aacaaaaatt taacgcgaat ttttaacaaaa tattaacgct tacaatttag gtggcacttt  
1080

tcggggaaat gtgcgcggaa cccctatttg tttatttttc taaatacatt caaatatgta  
1140

tccgctcatg agacaataac cctgataaat gcttcaataa tattgaaaaa ggaagagtat  
1200

gagtattcaa catttccgtg tcgcccttat tccctttttt gcggcatttt gccttcctgt  
1260

ttttgctcac ccagaaacgc tggtgaaagt aaaagatgct gaagatcagt tgggtgcacg  
1320

agtgggttac atcgaactgg atctcaacag cggtaagatc cttgagagtt ttcgccccga  
1380

agaacgtttt ccaatgatga gcacttttaa agttctgcta tgtggcgcgg tattatcccg  
1440

tattgacgcc gggcaagagc aactcggtcg ccgcatacac tattctcaga atgacttggt  
1500

tgagtactca ccagtcacag aaaagcatct tacggatggc atgacagtaa' gagaattatg  
1560

cagtgctgcc ataaccatga gtgataacac tgcggccaac ttactttctga caacgatcgg  
1620

aggaccgaag gagctaaccg ctttttttgca caacatgggg gatcatgtaa ctgccttga  
1680

tcgttgggaa ccggagctga atgaagccat accaaacgac gagcgtgaca ccacgatgcc  
1740

tgtagcaatg gcaacaacgt tgcgcaaact attaactggc gaactactta ctctagcttc  
1800

ccggcaacaa ttaatagact ggatggaggc ggataaagtt gcaggaccac ttctgcgctc  
1860

ggcccttccg gctggctggt ttattgctga taaatctgga gccggtgagc gtgggtctcg

1033399-10201

1920

cggtatcatt gcagcactgg ggccagatgg taagccctcc cgtatcgtag ttatctacac  
1980

gacggggagt caggcaacta tggatgaacg aaatagacag atcgctgaga taggtgcctc  
2040

actgattaag cattggtaac tgtcagacca agtttactca tatatacttt agattgattt  
2100

aaaacttcat ttttaattta aaaggatcta ggtgaagatc ctttttgata atctcatgac  
2160

caaaatccct taacgtgagt tttcgttcca ctgagcgtca gaccccgtag aaaagatcaa  
2220

aggatcttct tgagatcctt tttttctgcg cgtaatctgc tgcttgcaaa caaaaaaacc  
2280

accgctacca gcggtggttt gtttgccgga tcaagagcta ccaactcttt ttccgaaggt  
2340

aactggcttc agcagagcgc agataccaaa tactgtcctt ctagtgtagc cgtagttagg  
2400

ccaccacttc aagaactctg tagcaccgcc tacatactc gctctgctaa tcctgttacc  
2460

agtggctgct gccagtggcg ataagtcgtg tcttaccggg ttggactcaa gacgatagtt  
2520

accggataag gcgcagcggc cgggctgaac ggggggttcg tgcacacagc ccagcttgga  
2580

gcgaacgacc tacaccgaac tgagatacct acagcgtgag ctatgagaaa gcgccacgct  
2640

tcccgaaggg agaaaggcgg acaggtatcc ggtaagcggc agggtcggaa caggagagcg  
2700

cacgagggag cttccagggg gaaacgcctg gtatctttat agtcctgtcg ggtttcgcca  
2760

cctctgactt gagcgtcgat ttttgtgatg ctcgtcaggg gggcggagcc tatggaaaaa  
2820

cgccagcaac gcggcctttt tacggttcct ggccttttgc tggccttttg ctcacatggt

2880

ctttcctgcg ttatcccctg attctgtgga taaccgtatt accgcctttg agtgagctga  
2940

taccgctcgc cgcagccgaa cgaccgagcg cagcgagtca gtgagcgagg aagcggaaga  
3000

gcgccaata cgcaaaccgc ctctccccgc gcgttggccg attcattaat gcagctggca  
3060

cgacaggttt cccgactgga aagcgggcag tga  
3093

&lt;210&gt; 8

&lt;211&gt; 192

&lt;212&gt; DNA

&lt;213&gt; Bacteriophage M13

&lt;400&gt; 8

ttagtggtac ctttctattc tcaactccgct taggcttgcg gtggtgcggc cgcagaacaa  
60

aaactcatct cagaagagga tctgagatct agatctggag gcggtactgt tgaaagttgt  
120

ttagcaaaac ctcatacaga aaattcattt actaacgtct ggaaagacga caaaacttta  
180

gatcgttacg ct  
192

&lt;210&gt; 9

&lt;211&gt; 64

&lt;212&gt; PRT

&lt;213&gt; Bacteriophage M13

&lt;220&gt;

&lt;221&gt; MISC\_FEATURE

&lt;222&gt; (11)..(11)

&lt;223&gt; Xaa = stop codon

&lt;400&gt; 9

Leu Val Val Pro Phe Tyr Ser His Ser Ala Xaa Ala Cys Gly Gly Ala

1

5

10

15

Ala Ala Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Arg Ser Arg Ser  
20 25 30

Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys Pro His Thr Glu Asn  
35 40 45

Ser Phe Thr Asn Val Trp Lys Asp Asp Lys Thr Leu Asp Arg Tyr Ala  
50 55 60

<210> 10

<211> 2962

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic, comprising ampicillin gene sequence, ColE1 repli  
cation

origin, f1 replication origin, Plac promoter, influenza vi  
rus he  
magglutinin tag

<400> 10

gcgcaacgca attaatgtga gttagctcac tcattaggca cccagggctt tacactttat  
60

gcttccggct cgtatgttgt gtggaattgt gagcggataa caatttaccg gttcttttaa  
120

ctttagtaag gaggaattaa aaaatgaaat acctattgcc tacggcagcc gctggattgt  
180

tattactcgc ggcccagccg gccatggcgg cctgcaggc ctctagagcg gccgcttacc  
240

cgtacgacgt tccggactac gcaggtggct gctgataagt cgacctcgac caattcgccc  
300

tatagtgagt cgtattacaa ttcactggcc gtcgttttac aacgtcgtga ctgggaaaac  
360

cctggcggtta cccaacttaa tcgccttgca gcacatcccc ctttcgccag ctggcgtaat  
420

13403.0005NPUS00.ST25.txt



agcgaagagg cccgcaccga tcgcccttcc caacagttgc gcagcctgaa tggcgaatgg  
480

gacgcgccct gtagcggcgc attaaagcgc gcgggtgtgg tggttacgcg cagcgtgacc  
540

gtacacttg ccagcgccct agcgcccgt ctttcgctt tcttccttc ctttctcgcc  
600

acgttcgccg gctttccccg tcaagctcta aatcgggggc tccctttagg gttccgattt  
660

agtgccttac ggcacctcga ccccaaaaaa cttgattagg gtgatggttc acgtagtggg  
720

ccatcgccct gatagacggt ttttcgccct ttgacgttgg agtccacgtt ctttaatagt  
780

ggactcttgt tccaaactgg aacaacactc aaccctatct cggctctattc ttttgattta  
840

taagggattt tgccgatttc ggcctattgg ttaaaaaatg agctgattta acaaaaattt  
900

aacgcgaatt ttaacaaaat attaacgctt acaatttagg tggcactttt cggggaaatg  
960

tgcgcggaac ccctatttgt ttatttttct aaatacattc aaatatgtat ccgctcatga  
1020

gacaataacc ctgataaatg cttcaataat attgaaaaag gaagagtatg agtattcaac  
1080

atttccgtgt cgcccttatt cccttttttg cggcattttg ccttcctggt tttgctcacc  
1140

cagaaacgct ggtgaaagta aaagatgctg aagatcagtt ggggtgcacga gtgggttaca  
1200

tcgaactgga tctcaacagc ggtaagatcc ttgagagttt tcgccccgaa gaacgttttc  
1260

caatgatgag cactttttaa gttctgctat gtggcgcggt attatcccgt attgacgccg  
1320

ggcaagagca actcggtcgc cgcatacact attctcagaa tgacttggtt gagtactcac  
1380

10033399-110201

agaactctgt agcaccgcct acatacctcg ctctgctaata cctggttacca gtggctgctg  
2340

1003350 110203

ccagtggcga taagtcgtgt cttaccgggt tggactcaag acgatagtta ccggataagg  
2400

cgcagcggtc gggctgaacg gggggttcgt gcacacagcc cagcttggag cgaacgacct  
2460

acaccgaact gagataccta cagcgtgagc tatgagaaag cgccacgctt cccgaaggga  
2520

gaaaggcgga caggtatccg gtaagcggca gggtcggaac aggagagcgc acgagggagc  
2580

ttccaggggg aaacgcctgg tatctttata gtctgtcgg gtttcgccac ctctgacttg  
2640

agcgtcgatt tttgtgatgc tcgtcagggg ggcggagcct atggaaaaac gccagcaacg  
2700

cggccttttt acggttcctg gccttttgct ggccttttgc tcacatgttc tttcctgcgt  
2760

tatccctga ttctgtggat aaccgtatta ccgcctttga gtgagctgat accgctcgcc  
2820

gcagccgaac gaccgagcgc agcgagtcag tgagcgagga agcggaagag cgcccaatac  
2880

gcaaaccgcc tctccccgcg cgttggccga ttcattaatg cagctggcac gacaggtttc  
2940

ccgactggaa agcgggcagt ga  
2962

<210> 11

<211> 903

<212> DNA

<213> Bacteriophage M13

<400> 11

ttagtggtac ctttctattc tcaactccgt acatccccgcc tggagggcct acagtcagaa  
60

aaccatcgcc tgcgaatgaa gatcacagag ctggataaag acttggaaga ggtcaccatg  
120

cagctgcagg acgtcggagg ttgcgcggcc gcagaacaaa aactgatctc agaagaggat

180

ctgacgcgtg ctggcggcgg ctctggtggt ggttctggtg gcggctctga gggcggcggc  
240

tctgaggggtg gcggttctga gggcggcggc tctgaggggtg gcggttccgg tggcggctcc  
300

ggttccgggtg attttgatta tgaaaaaatg gcaaacgcta ataagggggc tatgaccgaa  
360

aatgccgatg aaaacgcgct acagtctgac gctaaaggca aacttgattc tgtcgctact  
420

gattacgggtg ctgctatcga tggtttcatt ggtgacgttt ccggccttgc taatggtaat  
480

ggtgctactg gtgattttgc tggctctaata tcccaaattg ctcaagtcgg tgacgggtgat  
540

aattcacctt taatgaataa tttccgtcaa tatttacctt ccctccctca atcgggttgaa  
600

tgtcgccctt ttgtctttgg cgctggtaaa ccatatgaat tttctattga ttgtgacaaa  
660

ataaacttat tccgtgggtg ctttgcggtt cttttatatg ttgccacctt tatgtatgta  
720

ttttctacgt ttgctaacat actgcgtaat aaggagtctt aataaggcgc gccacaattt  
780

cacagtaagg aggtttaata aatgaaaaag acagctattg cgattgcagt ggcactggct  
840

ggtttcgcta ccgtagcgca ggctagatct ggaggcggta ctggttgaaag ttgttttagca  
900

aaa  
903

<210> 12  
<211> 287  
<212> PRT  
<213> Bacteriophage M13  
  
<400> 12

Leu Val Val Pro Phe Tyr Ser His Ser Ala Thr Ser Arg Leu Glu Gly  
1 5 10 15

Leu Gln Ser Glu Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp  
20 25 30

Lys Asp Leu Glu Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys  
35 40 45

Ala Ala Ala Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu Thr Arg Ala  
50 55 60

Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Glu Gly Gly Gly  
65 70 75 80

Ser Glu Gly Gly Gly Ser Glu Gly Gly Gly Ser Glu Gly Gly Gly Ser  
85 90 95

Gly Gly Gly Ser Gly Ser Gly Asp Phe Asp Tyr Glu Lys Met Ala Asn  
100 105 110

Ala Asn Lys Gly Ala Met Thr Glu Asn Ala Asp Glu Asn Ala Leu Gln  
115 120 125

Ser Asp Ala Lys Gly Lys Leu Asp Ser Val Ala Thr Asp Tyr Gly Ala  
130 135 140

Ala Ile Asp Gly Phe Ile Gly Asp Val Ser Gly Leu Ala Asn Gly Asn  
145 150 155 160

Gly Ala Thr Gly Asp Phe Ala Gly Ser Asn Ser Gln Met Ala Gln Val  
165 170 175

Gly Asp Gly Asp Asn Ser Pro Leu Met Asn Asn Phe Arg Gln Tyr Leu  
180 185 190

Pro Ser Leu Pro Gln Ser Val Glu Cys Arg Pro Phe Val Phe Gly Ala  
 195 200 205

Gly Lys Pro Tyr Glu Phe Ser Ile Asp Cys Asp Lys Ile Asn Leu Phe  
 210 215 220

Arg Gly Val Phe Ala Phe Leu Leu Tyr Val Ala Thr Phe Met Tyr Val  
 225 230 235 240

Phe Ser Thr Phe Ala Asn Ile Leu Arg Asn Lys Glu Ser Met Lys Lys  
 245 250 255

Thr Ala Ile Ala Ile Ala Val Ala Leu Ala Gly Phe Ala Thr Val Ala  
 260 265 270

Gln Ala Arg Ser Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys  
 275 280 285

<210> 13  
 <211> 272  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic, comprising lac promoter, phage gene VIII leader  
 sequen ce, influenza virus hemagglutinin tag, phage gene III seque  
 nce

<400> 13  
 aattgtgagc ggataacaat ttaccggttc ttttaacttt agtaaggagg aattaa  
 60

tgaaaaagtc tttagtcctc aaagcctccg tagccgttgc taccctcggt ccatgctaa  
 120

gcttcgcttc tagagcggcc gcttatccat acgacgtacc agactacgca ggaggtcatc  
 180

accatcatca ccattagaga tctggaggcg gtactgttga aagttgttta gcaaaagcta  
 240

acatactgcg taataaggag tcttaagtcg ac  
272

<210> 14  
<211> 69  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Synthetic, comprising influenza virus hemagglutinin tag, Hi  
stidin  
e tag, phage gene III sequence

<220>  
<221> MISC\_FEATURE  
<222> (46)..(69)  
<223> Xaa = stop codon

<400> 14

Met Lys Lys Ser Leu Val Leu Lys Ala Ser Val Ala Val Ala Thr Leu  
1 5 10 15

Val Pro Met Leu Ser Phe Ala Ser Arg Ala Ala Ala Tyr Pro Tyr Asp  
20 25 30

Val Pro Asp Tyr Ala Gly Gly His His His His His His Xaa Arg Ser  
35 40 45

Gly Gly Gly Thr Val Glu Ser Cys Leu Ala Lys Ala Asn Ile Leu Arg  
50 55 60

Asn Lys Glu Ser Xaa  
65

<210> 15  
<211> 146  
<212> DNA  
<213> Homo Sapien

1003399.110201

&lt;400&gt; 15

tctagaggtg gaggaggtga ggagaagtcc cggctgttgg agaaggagaa ccgtgaactg  
60gaaaagatca ttgctgagaa agaggagcgt gtctctgaac tgcgccatca actccagtct  
120gtaggaggtt gttaataggg cgcgcc  
146

&lt;210&gt; 16

&lt;211&gt; 44

&lt;212&gt; PRT

&lt;213&gt; Homo Sapien

&lt;400&gt; 16

Ser Arg Gly Gly Gly Gly Glu Glu Lys Ser Arg Leu Leu Glu Lys Glu  
1 5 10 15Asn Arg Glu Leu Glu Lys Ile Ile Ala Glu Lys Glu Glu Arg Val Ser  
20 25 30Glu Leu Arg His Gln Leu Gln Ser Val Gly Gly Cys  
35 40

&lt;210&gt; 17

&lt;211&gt; 140

&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 17

tctcgaggag gtggtggaac atcccgctg gagggcctac agtcagaaaa ccatcgctg  
60cgaatgaaga tcacagagct ggataaagac ttggaagagg tcaccatgca gctgcaggac  
120gtcggaggtt gcgcggccgc  
140

&lt;210&gt; 18

&lt;211&gt; 47

T020T" 66E00T



<212> PRT  
 <213> Homo Sapien

<400> 18

Ser Arg Gly Gly Gly Gly Thr Ser Arg Leu Glu Gly Leu Gln Ser Glu  
 1 5 10 15

Asn His Arg Leu Arg Met Lys Ile Thr Glu Leu Asp Lys Asp Leu Glu  
 20 25 30

Glu Val Thr Met Gln Leu Gln Asp Val Gly Gly Cys Ala Ala Ala  
 35 40 45

<210> 19  
 <211> 32  
 <212> DNA  
 <213> Bacteriophage M13

<400> 19  
 tttagtggta cctttctatt ctcaactccgc tg  
 32

<210> 20  
 <211> 32  
 <212> DNA  
 <213> Bacteriophage M13

<400> 20  
 tagaaaggta ccactaaagg aattgcgaat aa  
 32

<210> 21  
 <211> 55  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Primer

<400> 21  
 ggaattgtga gcggataaca atttaccggt cacacaggaa acagctatga ccatg  
 55

ctacgcatga taagtcgacc tcgaccaatt cgccctatag tgagtcgtat tacaattcac  
420

tggccgtcgt tttaacaagt cgtgactggg aaaaccctgg cgttacccaa cttaatcgcc  
480

ttgcagcaca tccccctttc gccagctggc gtaatagcga agaggcccgcc accgatcgcc  
540

cttcccaaca gttgcgcagc ctgaatggcg aatgggacgc gccctgtagc ggcgcatata  
600

gcgcggcggg tgtggtggtt acgcgcagcg tgaccgctac acttgccagc gccctagcgc  
660

ccgctccttt cgctttcttc ctttcctttc tcgccacggt cgccggcttt ccccgtaag  
720

ctctaaatcg ggggctccct ttaggggtcc gatttagtgc tttacggcac ctcgacccca  
780

aaaaacttga ttaggggtgat gggtcacgta gtgggccatc gccctgatag acggtttttc  
840

gccctttgac gttggagtcc acgttcttta atagtggact cttgttccaa actggaacaa  
900

cactcaacc tatctcggtc tattcttttg atttataagg gattttgccg atttcggcct  
960

attggttaaa aaatgagctg atttaacaaa aatttaacgc gaattttaac aaaatattaa  
1020

cgcttacaat ttaggtggca cttttcgggg aaatgtgcgc ggaacccta tttgtttatt  
1080

tttctaaata cattcaaata tgtatccgct catgagacaa taaccctgat aaatgcttca  
1140

ataatattga aaaaggaaga gtagagtat tcaacatttc cgtgtcgccc ttattccctt  
1200

ttttgcggca ttttgccttc ctgtttttgc tcaccagaa acgctggtga aagtaaaaga  
1260

tgctgaagat cagttgggtg cacgagtggg ttacatcgaa ctggatctca acagcggtaa  
1320

gaccttgag agttttcgcc ccgaagaacg tttccaatg atgagcactt ttaaagttct  
1380

13403.0005NPUS00.ST25.txt

gctatgtggc gcggtattat cccgtattga cgccgggcaa gagcaactcg gtcgccgcat  
1440

acactattct cagaatgact tggttgagta ctcaccagtc acagaaaagc atcttacgga  
1500

tggcatgaca gtaagagaat tatgcagtgc tgccataacc atgagtgata aactgcggc  
1560

caacttactt ctgacaacga tcggaggacc gaaggagcta accgcttttt tgcacaacat  
1620

gggggatcat gtaactcgcc ttgatcggtg ggaaccggag ctgaatgaag ccataccaaa  
1680

cgacgagcgt gacaccacga tgccctgtagc aatggcaaca acgttgcgca aactattaac  
1740

tggcgaacta cttactctag cttcccggca acaattaata gactggatgg aggcggataa  
1800

agttgcagga ccacttctgc gtcggccct tccggetggc tggtttattg ctgataaatc  
1860

tggagccggt gagcgtgggt ctcgcggtat cattgcagca ctggggccag atggtaagcc  
1920

ctcccgtatc gtagttatct acacgacggg gagtcaggca actatggatg aacgaaatag  
1980

acagatcgct gagatagggtg cctcactgat taagcattgg taactgtcag accaagttta  
2040

ctcatatata ctttagattg atttaaaact tcatttttaa tttaaagga tctaggtgaa  
2100

gatccttttt gataatctca tgaccaaaat cccttaacgt gagttttcgt tccactgagc  
2160

gtcagacccc gtagaaaaga tcaaaggatc ttcttgagat ctttttttgc tgcgcgtaat  
2220

ctgctgcttg caaacaaaaa aaccaccgct accagcgggtg gtttgtttgc cggatcaaga  
2280

gctaccaact ctttttccga aggtaactgg cttcagcaga gcgcagatac caaatactgt  
2340

10033399.110201

ccttctagtg tagccgtagt taggccacca cttcaagaac tctgtagcac cgctacata  
2400

cctcgctctg ctaatcctgt taccagtggc tgctgccagt ggcgataagt cgtgtcttac  
2460

cgggttggac tcaagacgat agttaccgga taaggcgcag cggtcgggct gaacgggggg  
2520

ttcgtgcaca cagcccagct tggagcgaac gacctacacc gaactgagat acctacagcg  
2580

tgagctatga gaaagcgcca cgcttcccga agggagaaag gcggacagggt atccggtaag  
2640

cggcagggtc ggaacaggag agcgcacgag ggagcttcca gggggaaacg cctggatatct  
2700

ttatagtcct gtcgggtttc gccacctctg acttgagcgt cgatttttgt gatgctcgtc  
2760

aggggggagg agcctatgga aaaacgccag caacgcggcc tttttacggt tccctggcctt  
2820

ttgctggcct tttgctcaca tgttctttcc tgcgttatcc cctgattctg tggataaccg  
2880

tattaccgcc tttgagttag ctgataccgc tcgccgcagc cgaacgaccg agcgcagcga  
2940

gtcagtgagc gaggaagcgg aagagcgccc aatacgcaaa ccgcctctcc ccgcgcgttg  
3000

gccgattcat taatgcagct ggcacgacag gtttcccgcac tggaaagcgg gcagtga  
3057

<210> 24

<211> 3817

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic, comprising Cam gene sequence, ColE1 replication  
origin

, fl replication origin, lac promoter, GABAB receptor 2 dom  
ain, L

1003399 110603

gcgcaacgca attaatgtga gttagctcac tcattaggca cccagggctt tacactttat  
60

ctatgaccat gattacgcc aagcgcgttta acttttagtaa ggaggaatta aaaaatgaaa  
180

atgaaagcta ctaaactggt actgggcaac ccgtatgttg gctttgaaat gggttacgac  
300

gttcaactga ccgctaaact gggttaccca atcactgacg acctggacat ctacactcgt  
420

accggcgttt ctccggtctt cgctggcggt gttgagtaac cgatcactcc tgaaatcgct  
540

ccggacggag gtacatcccg cctggagggc ctacagtcag aaaaccatcg cctgcgaatg  
660

ggttgctaat gagcgcgctc actggccgctc gttttacaac gtcgtgactg ggaaaaccct  
780

gaagaggccc gcaccgatcg cccttcccaa cagttgcgca gcctgaatgg cgaatgggac  
900

gcgccttgta gcggcgatt aagcgggcg ggtgtggtg ttacgcgcag cgtgaccgt  
960

acacttgcca gcgcctagc gcccgctct ttcgctttct tcccttcctt tctcgccacg  
1020

ttcgccgggt ttccccgtca agctctaaat cgggggctcc ctttaggggt ccgatttagt  
1080

gctttacggc acctcgaccc caaaaaactt gattaggggt atgggttcacg tagtgggcca  
1140

tcgccctgat agacggtttt tcgccctttg acgttggagt ccacgttctt taatagtga  
1200

ctcttggtcc aaactggaac aacactcaac cctatctcgg tctattcttt tgatttataa  
1260

gggattttgc cgatttcggc ctattgggtta aaaaatgagc tgatttaaca aaaatttaac  
1320

gcgaatttta acaaaatatt aacgcttaca atttaggtgg cacttttcgg ggaaatgtgc  
1380

gcggaacccc tatttgttta tttttctaaa tacattcaaa tatgtatccg ctcagagac  
1440

aataaccctg ataaatgctt caataatatt gaaaaaggaa gagtatgagt attcaacatt  
1500

tccgtgtcgc ccttattccc ttttttgagg cattttgcct tccgtttttt gctcaccag  
1560

aaacgctggg gaaagtaaaa gatgctgaag atcagttggg tgcacgagtg gggtacatcg  
1620

aactggatct caacagcggg aagatccttg agagttttcg cccgaagaa cgttttccaa  
1680

tgatgagcac ttttcgaccg aataaatacc tgtgacggaa gatcattcg cagaataaat  
1740

aaatcctggg gtccctgttg ataccgggaa gccctgggac aacttttggc gaaatgaga  
1800

cgttgatcgg cacgtaagag gttccaactt tcaccataat gaaataagat cactaccggg  
1860

100399 "140399" 666600

cgtatttttt gagttgtcga gatttttcagg agctaaggaa gctaaaatgg agaaaaaaat  
1920

cactggatat accaccgttg atatatccca atggcatcgt aaagaacatt ttgaggcatt  
1980

tcagtcagtt gctcaatgta cctataacca gaccgttcag ctggatatta cggccttttt  
2040

aaagaccgta aagaaaaata agcacaagtt ttatccggcc tttattcaca ttcttgcccg  
2100

cctgatgaat gctcatccgg aattacgtat ggcaatgaaa gacggtgagc tggatgatg  
2160

ggatagtgtt cacccttgtt acaccgtttt ccatgagcaa actgaaacgt tttcatcgt  
2220

ctggagtga taccacgacg atttcggca gtttctacac atatattcgc aagatgtggc  
2280

gtgttacggt gaaaacctgg cctatttccc taaagggttt attgagaata tgtttttcgt  
2340

ctcagccaat ccctgggtga gtttcaccag ttttgattta aacgtggcca atatggacaa  
2400

cttcttcgcc ccgttttcac catgggcaaa tattatacgc aaggcgacaa ggtgctgatg  
2460

ccgctggcga ttcaggttca tcatgccgtt tgtgatggct tccatgtcgg cagaatgctt  
2520

aatgaattac aacagtactg cgatgagtgg cagggcgggg cgtaattttt ttaaggcagt  
2580

tattggtgcc cttaaagccc tggttgctac gcctgaataa gtgataataa gcggatgaat  
2640

ggcagaaatt cgaaagcaaa ttcgaccggc tcgtcgggtc agggcagggt cgtaaatag  
2700

ccgcttatgt ctattgctgg tttaccgggt tattgactac cggaagcagt gtgaccgtgt  
2760

gcttctcaaa tgccatgaggc cagtttgctc aggctctccc cgtggaggta ataattgacg  
2820

100339910201



atatgatcct ttttttctga tcaaaaagga tctaggtgaa gatccttttt gataatctca  
2880

tgacaaaaat cccttaacgt gagttttcgt tccactgagc gtcagacccc gtagaaaaga  
2940

tcaaaggatc ttcttgagat cctttttttc tgcgcgtaat ctgctgcttg caaacaaaaa  
3000

aaccaccgct accagcgggtg gtttgtttgc cggatcaaga gctaccaact ctttttccga  
3060

aggtaactgg cttcagcaga gcgcagatac caaatactgt ccttctagtg tagccgtagt  
3120

taggccacca cttcaagaac tctgtagcac cgcctacata cctcgctctg ctaatcctgt  
3180

taccagtggc tgctgccagt ggcgataagt cgtgtcttac cgggttggac tcaagacgat  
3240

agttaccgga taaggcgcag cggtcgggct gaacggggggg ttcgtgcaca cagcccagct  
3300

tggagcgaac gacctacacc gaactgagat acctacagcg tgagctatga gaaagcgcca  
3360

cgcttcccga agggagaaaag gcggacaggt atccggtaag cggcaggggc ggaacaggag  
3420

agcgcacgag ggagcttcca gggggaaaacg cctggtatct ttatagtcct gtcgggtttc  
3480

gccacctctg acttgagcgt cgatttttgt gatgctcgtc agggggggcgg agcctatgga  
3540

aaaacgccag caacgcggcc tttttacggt tcttggcctt ttgctggcct tttgctcaca  
3600

tgttctttcc tgcgttatcc cctgattctg tggataaccg tattaccgcc tttgagttag  
3660

ctgataccgc tcgccgcagc cgaacgaccg agcgcagcga gtcagtgagc gaggaagcgg  
3720

aagagcgccc aatacgcaaa ccgcctctcc ccgcgcgttg gccgattcat taatgcagct  
3780

ggcacgacag gtttcccgac tggaaagcgg gcagtga  
3817

10033399 110201